AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19 (Cancelled).

Claim 20 (Previously Presented): A device for measuring of an electrical impedance, of an object, comprising:

an in-phase and a quadrature measurement channels;

a generator of driving signals;

a circuit of an excitation signal, the output of which is connected to an input of the object, wherein first and second outputs of the generator of driving signals are connected to inputs and of reference circuits of synchronous detectors, wherein the generator of driving signals comprises a generator of quadrature signals and two formers of the bipolar rectangular signals;

the circuit of the excitation signal comprises a device for generating a shortened pulse, the control input of which is connected to the output of the auxilary signal of the generator of quadrature signals, the input is connected to the output of the former of the bipolar rectangular signal, and the output is connected to the input of the bio-object;

the reference voltage circuit of the synchronous detector of the in-phase measurement channel comprises a device for generating of shortened pulse is introduced, the control input of which is connected to the output of the auxiliary signal of the generator of quadrature signals, the input is connected to the output of the former of the bipolar rectangular signal, and the output is connected to the reference input of the synchronous detector;

the reference circuit of the synchronous detector of the quadrature measurement channel comprises a device for generating of shortened pulse, the control input of which is connected to the output of the auxiliary signal of the generator of quadrature signals, the input is connected to the output of the former of the bipolar rectangular signal, and the output is connected to the reference input of the synchronous detector.

Claim 21 (Previously Presented): The device according to claim 20, wherein the generator of quadrature signals comprises a shift register of predetermined bit length and the quadrature triggers.

Claim 22 (Previously Presented): The device according to claim 21, wherein the switching multiplier in the synchronous detectors is implemented on the basis of digital techniques.

Claim 23 (Previously Presented): The device according to in claim 20, wherein the synchronous detectors are implemented on the basis of an analog multiplier.

Claim 24 (Previously Presented): The device according to claim 20, wherein the synchronous detectors are implemented on the basis of a switching multiplier.

Claim 25 (Previously Presented): The device according to claim 23, wherein the switching multiplier in the synchronous detectors is implemented on the basis of mixed signal analogue/digital techniques.

Claim 26 (Cancelled).